

I. Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims

1. (currently amended) A shaped charge comprising:

a liner for a shaped charge;

a housing with an opening and a cavity formed to receive the liner; and

an amount of main body of explosive disposed between the liner and the housing;

said main body of explosive comprising a mixture of a first quantity of explosive material and a second quantity of explosive, wherein said first quantity of explosive comprises particles having a size greater than the size of the particles of the second quantity of explosive,

wherein said main body of explosive is characterized by being combustably initiated by a shock wave.

2. (cancelled)

3. (currently amended) The shaped charge of claim 2 1, wherein said shock wave is produced by activation of a detonating cord.

4. (original) The shaped charge of claim 1, wherein main body of explosive is encapsulated within a bonding agent.

5. (original) The shaped charge of claim 4, wherein said bonding agent is a polymeric compound.

6. (original) The shaped charge of claim 1, wherein said main body of explosive has a density greater than said first quantity of explosive or said second quantity of explosive.
7. (original) The shaped charge of claim 1, wherein said main body of explosive has a pressed density that is at least 90% of its theoretical mean density.
8. (original) The shaped charge of claim 1, wherein said main body of explosive has a pressed density from approximately 96% to approximately 98% of its theoretical mean density.
9. (original) The shaped charge of claim 1, where said first quantity of explosive consists of particles having diameters that range from approximately 300 microns to approximately 45 microns.
10. (previously presented) The shaped charge of claim 1, where said first quantity of explosive comprises Class I explosive.
11. (original) The shaped charge of claim 1, where said second quantity of explosive consists of particles having a diameter that ranges from approximately 5 microns to approximately 7 microns.
12. (original) The shaped charge of claim 1, wherein the ratio of particle size of said first quantity of explosive to said second quantity of explosive ranges from approximately 6 to approximately 60.
13. (currently amended) The shaped charge of claim 1, where said second quantity of explosive comprises Class V explosive.
14. (original) The shaped charge of claim 1, where said second quantity of explosive has a distribution of particles such that 90% of the particles have a diameter of less than 10 microns.

15. (original) The shaped charge of claim 1, wherein said main body of explosive comprises approximately 50% by weight of said first quantity of explosive and approximately 50% by weight of said second quantity of explosive.
16. (original) The shaped charge of claim 1, wherein said explosive material comprises from approximately 25% to 75% by weight of said first quantity of explosive and from approximately 25% to 75% by weight of said second quantity of explosive.
17. (currently amended) A method of forming a shaped charge comprising:
blending a first quantity of explosive with a second quantity of explosive to produce a blended explosive material having a density greater than said first quantity of explosive or said second quantity of explosive, wherein said first quantity of explosive comprises particles having a size greater than the size of the particles of said second quantity of explosive; and
disposing said encapsulated explosive within a shaped charge housing,
wherein said blended explosive material is characterized by being combustably initiated by a shock wave.
18. (original) The method of claim 17 further comprising attaching a detonating cord to the housing.
19. (original) The method of claim 17, wherein said bonding agent comprises a mixture of polymeric compound and solvent.
20. (original) The method of claim 17 further comprising activating the detonating cord to produce a shock wave, such that application of the shock wave to said shaped charge alone will detonate the shaped charge.

21. (original) The method of claim 17 further comprising blending said explosive material to produce a pressed density of from approximately 96% to approximately 98% of its theoretical mean density.
22. (original) The method of claim 17 further comprising blending said first quantity of explosive with an equal amount of said second quantity of explosive.
23. (original) The method of claim 16 where said first quantity of explosive consists of particles having a diameter that ranges from approximately 300 microns to approximately 45 microns.
24. (original) The method of claim 17 where said first quantity of explosive consists of Class I explosives.
25. (original) The method of claim 17 where said second quantity of explosive consists of Class V explosives.
26. (original) The method of claim 17 where said second quantity of explosive consists of particle sizes of approximately 5 to 7 microns.
27. (original) The method of claim 17, where said second quantity of explosive has a distribution of particles such that 90% of the particles have a diameter of less than 10 microns.
28. (original) The method of claim 17, wherein said encapsulated main body of explosive comprises approximately 50% by weight of said first quantity of explosive and approximately 50% by weight of said second quantity of explosive.
29. (original) The method of claim 17, wherein said encapsulated main body of explosive comprises from approximately 25% to 75% by weight of said first quantity of explosive and from approximately 25% to 75% by weight of said second quantity of explosive.

30. (original) The method of claim 19 wherein said bonding agent comprises up to 10% by weight of said polymeric compound.
31. (original) The method of claim 17, wherein the ratio of particle size of said first quantity of explosive to said second quantity of explosive ranges from approximately 6 to approximately 60.
32. (previously presented) The method of claim 17 further comprising adding a fluid to the blended explosive material to produce a slurry.
33. (previously presented) The method of claim 17 further comprising introducing a bonding agent to the slurry to produce an encapsulated main body of explosive.
34. (previously presented) The shaped charge of claim 1 wherein said first quantity of explosive is selected from the group consisting of Class II, Class III, Class IV, and Class V explosive.
35. (previously presented) The shaped charge of claim 1 wherein said second quantity of explosive is selected from the group consisting of Class I, Class II, Class III, and Class IV explosive.